

MicroTouch™ DST



Touch System

Product Highlights

- Fast, accurate, repeatable touch
- Touch operates with static objects or other touches on the screen
- Touch unaffected by surface contaminants, such as liquids, dirt, dust and grime
- Excellent light transmission provides vibrant optical characteristics with anti-glare properties
- Operation unaffected by surface damage
- Input flexibility from finger or stylus, such as pencil, credit card, fingernail, or almost any pointing stylus
- Dual-mode controller allows for USB and/or serial communication protocol
- Available for display sizes 32" to 46"

Fundamentally Different Touch for Interactive Signage

For most popular large-screen touch technologies “touch position” is calculated when a finger interrupts an optical field, infrared light beams or acoustic waves on or above the surface of the touch screen substrate. Relying on these “active” surface properties makes these technologies susceptible to different types of interference or environmental limitations, which makes 3M’s Dispersive Signal Technology (DST) a fundamentally different touch solution for large-format display applications.

The **MicroTouch™ DST Touch System**, based on 3M Dispersive Signal Technology, consists of a chemically-strengthened glass substrate with piezos mounted on each corner, mated to a sophisticated, dedicated controller. The DST Touch System determines the touch position by pinpointing the source of “bending waves” created by finger or stylus contact within the glass substrate. This process of interpreting bending waves within the glass substrate helps eliminate traditional performance issues related to on-screen contaminants and surface damage, and provides fast, accurate touch attributes.

3M Innovation

The MicroTouch™ DST touch systems is another example of the innovative products expected from 3M Touch Systems. Our world-class support and service organization provides expert technical consulting wherever your products are designed, integrated or delivered. It is this total, global approach that helps ensure exceptional service and support, backed by 3M.

MicroTouch™ DST Touch System

TOUCH SYSTEM Performance

Input Method	Finger and stylus input
Accuracy	Reported coordinates are within 1.0% of true position (based on viewing area dimensions)
Touch System Resolution	16k x 16k (maximum resolution)
Response Time	20 ms for tap input
Minimum Touch Impact*	50 mN-s (milli-newton seconds), the equivalent of a very light touch

Optics

Light Transmission**	92% light transmission (±2%)
Surface Finish	Anti-glare etch (standard)

Mechanical

Glass Thickness	2.2 mm (± 0.2 mm), glass only
Overall Thickness	4.4 mm (± 0.5 mm) Includes glass thickness, tail, electronics components, and mounting material
Substrate Material	Chemically-strengthened glass substrate
Surface Hardness	Mohs pick with a hardness rating of 7 or higher is required to induce a scratch. Scratches will not result in a functional failure
Cleaning	Standard, non-abrasive glass cleaners acceptable

Functional Reliability

Surface Obstructions	Touch screen operation withstands surface contaminants such as dirt, dust and grime
Operating Temperature***	-15° C to +70° C for the touch screen Relative Humidity: Up to 90% non-condensing
Storage Temperature***	-50° C to +85° C Relative Humidity: Up to 90% non-condensing
System Warranty	3-year limited warranty

* Tested at 73 dBA under pink noise, ambient condition

** Test uses BYK Gardner Haze Gard Plus.

*** See MicroTouch DST Delivery Specifications for storage and operating temperatures at varying humidity levels.

ELECTRONICS Controller

Communications Protocol	Auto-sensing dual mode (Serial plug and play and/or USB HID)
Nominal Uncased Dimensions	2.66" x 3.75" x 0.45" 67.56 mm x 95.25 mm x 11.43 mm
MTBF	>140k hours per MIL Std. 217F calculation
Regulatory Drivers	UL/cUL, FCC-A, CE, VCCI, AS/NZS 3548 MicroTouch MT7 for Microsoft® Windows® 2000, XP and VISTA

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